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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,170	12/10/2003	Yong Cheol Park	0465-1110P	5045

2292 7590 04/02/2008
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EXAMINER	
GUPTA, PARUL H	

ART UNIT	PAPER NUMBER
2627	

NOTIFICATION DATE	DELIVERY MODE
04/02/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/731,170	PARK ET AL.	
	Examiner	Art Unit	
	PARUL GUPTA	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/4/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,8 and 20-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8 and 20-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-5, 8, and 20-31 are pending for examination as interpreted by the examiner. The amendment and arguments filed on 1/4/08 were considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 8, and 20-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al., US Patent 5,448,728 in view of Ito et al., US Patent 6,292,445.

Regarding claim 1, Takano et al. discloses a method of managing overwrite on an optical disc (column 1, lines 40-45), comprising: writing replacement-recording data which is requested to be overwritten in a specified area of the disc where recording is completed in another data area physically separated from the specified area in the disc (column 1, lines 60-61); and recording management information for managing the physically replacement-recorded data (column 1, lines 61-64), wherein the management information (in management table of element 20 of figures 10 and 11) includes two entries, the first entry includes start address information of the specified area requested to be overwritten and start address information ("start block location" of column 10, line 16) of the replacement-recorded area (column 10, line 16), and the second entry includes end address information of the specified area requested to be overwritten and

end address information ("last block location" of column 10, line 17) of the replacement-recorded area (column 10, line 17). As explained in column 10, lines 46-54, this will track more than only updated areas. As each address is recorded separately in Takano et al., the first entry is the two start addresses and the second entry is the two end addresses. Takano et al. does not but Ito et al. teaches specifically that the data is replaced and the management area stores information regarding the replaced and replacement areas (column 4, lines 59-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Takano et al. with replacement data as taught by Ito et al. The motivation would be to conserve space by overwriting on unnecessary data instead of using more disc space to write extra information to replace defective information.

Regarding claim 2, Takano et al. discloses in figure 10B the method of claim 1, wherein the data requested to be overwritten is replacement-recorded before an outer spare area (F or F2) among the data area of the disc (column 9, lines 48-62).

Regarding claim 3, Takano et al. discloses the method of claim 1, wherein the data which is requested to be overwritten is consecutively replacement-recorded after a final data recording position ("last data-written block") among the data area of the disc (column 6, lines 2-8).

Regarding claim 4, Takano et al. discloses in figure 10B the method of claim 1, wherein the data which is requested to be overwritten is replacement-recorded in an overwrite area (21) separately allocated in the data area of the disc (column 9, lines 53-55).

Regarding claim 5, Takano et al. discloses in figure 10B the method of claim 1, wherein the data which is requested to be overwritten is replacement-recorded in a spare area (21) of the disc (column 9, lines 53-55).

Regarding claim 20, Takano et al. discloses in figure 1 an apparatus for recording/reproducing an optical disc (column 1, lines 40-45), comprising: a recording/reproducing device for recording data in a replacement area of a data area and recording a management information regarding the replacement recording data an area which is requested to be written is an area where the recording is completed (column 7, lines 31-43 explain more clearly how and where the information is recorded), wherein the management information (in management table of element 20 of figures 10 and 11) includes two entries, the first entry includes start address information of the area requested to be overwritten and start address information ("start block location" of column 10, line 16) of the replacement area (column 10, line 16), and the second entry (data size) includes end address information of the area requested to be overwritten and end address information ("last block location" of column 10, line 17) of the replacement area (column 10, line 17). As explained in column 10, lines 46-54, this can be used to track more than only updated areas. As each address is recorded separately in Takano et al., the first entry is the two start addresses and the second entry is the two end addresses. Takano et al. does not but Ito et al. teaches specifically that the data is replaced and the management area stores information regarding the replaced and replacement areas (column 4, lines 59-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Takano et al.

with replacement data as taught by Ito et al. The motivation would be to conserve space by overwriting on unnecessary data instead of using more disc space to write extra information to replace defective information.

Regarding claim 21, Takano et al. discloses a computer-readable recording medium comprising: a data area ("storage area" as given in column 7, line 32) including an area being usable as a replacement area; and at least one management area (where "management data" of column 7, lines 55-56 is written) for storing management information, wherein the management information (in management table of element 20 of figures 10 and 11) includes two entries, the first entry includes start address information of an original area and start address information ("start block location" of column 10, line 16) of the replacement area (column 10, line 16), the second entry (data size) including end address information of the original area and the replacement area (by providing the start address and data size, the end address can inherently be derived), and the original area is an area of the data area which is requested to be overwritten (column 10, line 17). As explained in column 10, lines 46-54, this can be used to track more than only updated areas. As each address is recorded separately in Takano et al., the first entry is the two start addresses and the second entry is the two end addresses. Takano et al. does not but Ito et al. teaches specifically that the data is replaced and the management area stores information regarding the replaced and replacement areas (column 4, lines 59-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Takano et al. with replacement data as taught by Ito et al. The motivation would be to conserve space

by overwriting on unnecessary data instead of using more disc space to write extra information to replace defective information.

Regarding claim 22, Takano et al. discloses in figure 1 the recording medium of claim 21, wherein the recording medium is a write once optical disc (column 7, lines 13-14).

Regarding claim 24, Takano et al. discloses the method according to claim 1, wherein the start address information and the end address information include first physical sector numbers (first PSNs). The "start block location" and "last block location" of column 10, line 16 and 17 are the physical sectors where the information is located.

Regarding claim 25, Takano et al. discloses the method according to claim 1, wherein the management information further includes status information indicating a type of each of the first and second entries. Column 10, lines 11-23 explain all of the information included in the management table. The updated data and what is stored itself, whether it be the initial value of the size or the last block location, is the type of entry.

Regarding claim 27, Takano et al. discloses the apparatus according to claim 20, wherein the start address information and the end address information include first physical sector numbers (first PSNs). The "start block location" and "last block location" of column 10, line 16 and 17 are the physical sectors where the information is located.

Regarding claim 28, Takano et al. discloses the apparatus according to claim 20, wherein the management information further includes status information indicating a type of each of the first and second entries. Column 10, lines 11-23 explain all of the

information included in the management table. The updated data and what is stored itself, whether it be the initial value of the size or the last block location, is the type of entry.

Regarding claim 30, Takano et al. discloses the recording medium according to claim 21, wherein the start address information and the end address information include first physical sector numbers (first PSNs). The "start block location" and "last block location" of column 10, line 16 and 17 are the physical sectors where the information is located.

Regarding claim 31, Takano et al. discloses the recording medium according to claim 21, wherein the management information further includes status information indicating a type of each of the first and second entries. Column 10, lines 11-23 explain all of the information included in the management table. The updated data and what is stored itself, whether it be the initial value of the size or the last block location, is the type of entry.

Regarding claim 23, Takano et al. discloses the method according to claim 1, wherein the second entry immediately follows the first entry. Column 10, lines 11-23 explain how both entries are within the same management table. As figures 10a-10c show, the management table merely hold this information, meaning that the two entries are in close proximity to each other. To actually have one entry immediately follow the other entry would have been obvious to one with ordinary skill in the art through routine

experimentation and optimization in the absence of criticality since placing one entry following another would serve the same purpose.

Regarding claim 26, Takano et al. discloses the apparatus according to claim 20, wherein the second entry immediately follows the first entry. Column 10, lines 11-23 explain how both entries are within the same management table. As figures 10a-10c show, the management table merely hold this information, meaning that the two entries are in close proximity to each other. To actually have one entry immediately follow the other entry would have been obvious to one with ordinary skill in the art through routine experimentation and optimization in the absence of criticality since placing one entry following another would serve the same purpose.

Regarding claim 29, Takano et al. discloses the recording medium according to claim 21, wherein the second entry immediately follows the first entry. Column 10, lines 11-23 explain how both entries are within the same management table. As figures 10a-10c show, the management table merely hold this information, meaning that the two entries are in close proximity to each other. To actually have one entry immediately follow the other entry would have been obvious to one with ordinary skill in the art through routine experimentation and optimization in the absence of criticality since placing one entry following another would serve the same purpose.

Regarding claim 8, Ito et al. further teaches a method, wherein the management information is recorded in a temporary defect management area of the disc ("defect management information area" as given in abstract).

3. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. in view of Ito et al., further in view of Alexander et al., US Patent 6,766,418.

Takano et al. in view of Ito et al. teaches the limitations of claims 1, 20, and 21. Takano et al. in view of Ito et al. does not but Alexander et al. teaches that two separate starting locations and two separate ending locations are each stored as an entry (figure 8), one following the other (column 25, lines 49-57). It would have been obvious to one of ordinary skill at the time of the invention to include the management structure taught by Alexander et al. into the system of Takano et al. in view of Ito et al. The motivation is to better organize the management area.

Response to Arguments

4. Applicant's arguments with respect to all claims have been considered.

Applicant contends that Takano et al. does not teach recording both start addresses as one entry and both end addresses as a second entry. However, the examiner disagrees. As each address is recorded separately in Takano et al., the first entry is the two start addresses and the second entry is the two end addresses.

Applicant contends that Takano et al. does not teach recording replacement data. The examiner agrees and adjusted the rejection appropriately.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARUL GUPTA whose telephone number is (571)272-

5260. The examiner can normally be reached on Monday through Thursday, from 9:30 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/
Supervisory Patent Examiner, Art Unit 2627

/P. G./
Examiner, Art Unit 2627
3/11/08